AMENDMENTS TO THE CLAIMS

The following list of claims replaces all prior versions and lists of claims:

Claim 1 (currently amended): A method for enhancing molecular chaperone activity of ~~α-crystalline~~ α-crystallin (comprising ~~of forms αA- crystalline~~ αA-crystallin or an active mutant thereof and ~~αB-crystalline~~ αB-crystallin or an active mutant thereof) with a ~~biological~~ biologically compatible amino acid molecule of Arginine Hydrochloride ("Arg.HCl"), said method comprising the steps of:

(a) isolating ~~and purifying α-crystalline~~ α-crystallin from calf eye lenses ~~by convention methods (as described in reference 24)~~, and

(b) ~~reacting α-crystalline~~ mixing α-crystallin ~~in the presence of phosphate buffer of pH 7.4~~ with Arg.HCl and either insulin or ~~ζ-crystalline~~ ζ-crystallin ~~in presence or absence of DTT~~, and

(c) observing [[the]] an enhancement in chaperone activity of ~~α-crystalline~~ α-crystallin in the presence of Arg.HCl ~~by fluorescence spectrophotometer~~.

Claim 2 (cancelled).

Claim 3 (original): A method as claimed in claim 1, wherein Arg.HCl is in the range of about 50 to 350 mM.

Claim 4 (currently amended): A method as claimed in claim [[3]] 1, wherein Arg.HCl is in the range of about 100 to 300 mM.

Claim 5 (currently amended): A method as claimed in claim 1, wherein Arg.HCl enhances the chaperone activity of ~~α-crystalline~~ α-crystallin by about 95%.

Claim 6 (currently amended): A method as claimed in claim [[5]] 1, wherein Arg.HCl enhances the chaperone activity of ~~α-crystalline~~ α-crystallin by about 90%.

Claim 7 (currently amended): A method as claimed in claim 1, wherein Arg.HCl ~~enhance~~ enhances the chaperone activity of ~~α-crystalline~~ α-crystallin by about 90% in presence of various aggregation systems.

PAGE 5/12 * RCVD AT 5/7/2007 8:02:30 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:2738300 * CSID:650 813 5993 * DURATION (mm-ss):04-24

Claim 8 (currently amended): A method as claimed in claim [[7]] 1, wherein Arg.HCl ~~enhance~~ enhances the chaperone activity of ~~α-crystalline~~ α-crystallin by about 81% in presence of various aggregation systems.

Claim 9 (currently amended): A method as claimed in claim [[1 and]] 7, wherein the aggregation ~~systems maybe~~ system ~~selected from group comprising~~ comprises of insulin, or ζ-crystallin ~~and related compounds~~.

Claim 10 (currently amended): A method as claimed in claim 1, wherein Arg.HCl at a temperature of about 30°C protects the ~~α-crystalline~~ α-crystallin by about 35%.

Claim 11 (currently amended): A method as claimed in claim 1, wherein Arg.HCl at a temperature of about 30°C protects the ~~α-crystalline~~ α-crystallin by about 28%.

Claim 12 (cancelled).

Claim 13 (currently amended): A method as claimed in ~~claims 1 and 12~~ claim 1, wherein in the presence of Arg.HCl the molecular mass of ~~α-crystalline~~ α-crystallin is reduced to ~360 kDa ~~thereby bringing about subtle changes in the tertialry structure and significant changes in the quaternary structure of both homo-multimers or hetero-multimers of αA- crystalline and αB-crystalline to enhance the chaperone activity~~.

Claim 14 (currently amended): A method as claimed in claim 1, wherein ~~wild type and~~ the mutant ~~αA- crystalline~~ αA-crystallin is [[are]] less sensitive to Arg.HCl than ~~αB-crystalline~~ αB-crystallin, thereby enhancing the chaperone activity.

Claim 15 (currently amended): A method as claimed in ~~claims~~ claim 1 ~~and 14~~, wherein ~~protection~~ a protective effect of mutant ~~αB-crystalline~~ αB-crystallin ~~(R120αB-crystallin)~~ is about 80% that of wild type αB-crystallin in the presence of Arg.HCl.

PAGE 6/12 * RCVD AT 5/7/2007 8:02:30 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:2738300 * CSID:650 813 5993 * DURATION (mm-ss):04-24

Claim 16 (currently amended): A method as claimed in claim [[15]] 1, wherein ~~protection~~ a protective effect of mutant ~~αB-crystalline~~ αB-crystallin ~~(R120αB-crystallin)~~ is about 75% that of wild type αB-crystallin in the presence of Arg.HCl.

Claim 17 (currently amended): A method as claimed in claim 1, wherein Arg.HCl enhances the ~~α-crystalline~~ α-crystallin chaperone activity by about 45% by exposing the hydrophobic surfaces of ~~α-crystalline~~ α-crystallin.

Claim 18 (currently amended): A method as claimed in claim [[14]] 1, wherein Arg.HCl enhances the ~~α-crystalline~~ α-crystallin chaperone activity by about 38% by exposing the hydrophobic surfaces of ~~α-crystalline~~ α-crystallin.

Claim 19 (new): A method as claimed in claim 1, wherein the enhancement in chaperone activity of α-crystallin is observed by fluorescence spectrophotometer.

Claim 20 (new): A method as claimed in claim 1, wherein the mixing of α-crystallin with Arg.HCl and either insulin or ζ-crystallin is carried out in the presence of dithiothreitol ("DTT").

PAGE 7/12 * RCVD AT 5/7/2007 8:02:30 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/10 * DNIS:2738300 * CSID:650 813 5993 * DURATION (mm-ss):04-24